IN THE CLAIMS

1. (Original) In a data processing system executing tasks in different time partitions, a method of scheduling tasks comprising:

determining available slack; and

allocating slack to tasks in different time partitions.

2. (Original) The method of claim 1 wherein the tasks that are allocated slack are aperiodic, non-essential tasks.

3. (Original) The method of claim 2 wherein the tasks comprise essential and non-essential tasks, and wherein the tasks that are allocated slack are from the group consisting of new non-essential tasks and enhancements to essential tasks.

4. (Original) The method of claim 1 wherein in determining, both timeline slack and reclaimed slack are determined.

5. (Original) A machine-readable medium having instructions stored thereon capable of causing a processor to carry out a method, the method comprising:

scheduling tasks to execute in different time partitions;

determining available slack; and

allocating slack to tasks in different time partitions.

6. (Original) In a data processing system executing tasks in different time partitions, a method of scheduling tasks comprising:

collecting unscheduled execution time from at least one time partition; and,

allocating the unscheduled execution time to a task in another time partition.

7. (Original) The method of claim 6, wherein the task in the other partition is an aperiodic, non-essential task.

8. (Original) The method of claim 7, wherein the tasks comprise essential and non-essential tasks, and wherein the task in the other partition is from the group consisting of new non-essential tasks and enhancements to essential tasks.

9. (Original) The method of claim 6, wherein in collecting unscheduled execution time, both timeline slack and reclaimed slack are collected.

10. (Original) A machine-readable medium having instructions stored thereon capable of causing a processor to carry out a method, the method comprising:

scheduling tasks to execute in different time partitions;

collecting unscheduled execution time from at least one time partition; and

allocating the unscheduled execution time to a task in another time partition.

11. (Original) In a time-partitioned system executing essential and non-essential tasks, a method of scheduling tasks comprising:

determining available slack from the group consisting of timeline slack and reclaimed slack;

pooling available slack in a common slack pool; and

allocating slack from the common slack pool to tasks.

12. (Original) The method of claim 11, wherein in allocating, slack is allocated to non-essential tasks.

13. (Original) The method of claim 11, wherein in allocating, slack is allocated to a task from the group consisting of new non-essential tasks and enhancements to essential tasks.

14. (Original) A machine-readable medium having instructions stored thereon capable of causing a processor to carry out a method, the method comprising:

scheduling tasks to execute in different time partitions;

determining available slack from the group consisting of timeline slack and reclaimed slack;

pooling available slack in a common slack pool; and

allocating slack from the common slack pool to tasks.

15. (Original) In a time-partitioned system executing essential and non-essential tasks, a method of scheduling tasks comprising:

determining available timeline slack;

determining available reclaimed slack;

pooling available timeline and reclaimed slack; and

allocating slack to a task in any time partition.

16. (Original) The method of claim 15, wherein in allocating, slack is allocated to a non-essential task.

17. (Original) The method of claim 15, wherein in allocating, slack is allocated to a task from the group consisting of new non-essential tasks and enhancements to essential tasks.

18. (Original) A machine-readable medium having instructions stored thereon capable of causing a processor to carry out a method, the method comprising:

scheduling tasks to execute in different time partitions;

determining available timeline slack;

determining available reclaimed slack;

pooling available timeline and reclaimed slack; and

allocating slack to a task in any time partition.

19. (Previously Presented) A time-partitioned system comprising:

a processor to execute a plurality of tasks, wherein each task of the plurality of tasks is of a task type selected from the group consisting of essential and non-essential, and wherein each task of the plurality of tasks has associated with it at least one worst case execution time; and

an executive to be in communication with the processor and to control dispatching of tasks on the processor, wherein the executive comprises:

a first module that is to determine available slack; and

a second module that is to allocate available slack to tasks in different time partitions.

20. (Previously Presented) The time-partitioned system of claim 19, wherein the first module is to determine available slack by determining slack from the group consisting of timeline slack, reclaimed slack, and idle time.

21. (Previously Presented) The time-partitioned system of claim 20, wherein the first module is to maintain a pool of available slack.

22. (Previously Presented) The time-partitioned system of claim 20, wherein the first module is to maintain a common pool of available slack that can be used by tasks in any time partition.

23. (Previously Presented) The time-partitioned system of claim 19, wherein the second module is to allocate available slack to tasks that are non-essential.

24. (Original) The time-partitioned system of claim 23, wherein the tasks are from the group consisting of new non-essential tasks and enhancements to essential tasks.

25. (Previously Presented) The time-partitioned system of claim 23, wherein the executive further comprises a third module that is to assign different priority levels to tasks.

26. (Previously Presented) The time-partitioned system of claim 25, wherein the first module is to determine available slack for tasks at each priority level.

27. (Previously Presented) The time-partitioned system of claim 25, wherein the second module is to allocate available slack to tasks in order of priority.

28. (Original) The time-partitioned system of claim 19, wherein the system is a flight control system.

29. (Original) The time-partitioned system of claim 19, wherein the system is a real-time control system.

30. (Original) The time-partitioned system of claim 19, wherein the executive comprises a single set of slack variables and a single slack table.